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What's wrong? Moral understanding in psychopathic offenders

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Introduction

Psychopathy is a personality disorder characterized by reduced empathy and guilt, poor impulse control, and a predilection for manipulation and antisocial behavior (Hare & Neumann, 2008). Although the prevalence of psychopathy approaches only one percent of the general population, individuals who meet criteria for this diagnosis are disproportionately represented in correctional settings, on the order of 15–20% (Hare, Hart, & Harpur, 1991), and they are four times more likely than low-psychopathy offenders to return to prison on a new conviction within one year of release (Hart, Kropp, & Hare, 1988; Hemphill, Hare, & Wong, 1998).

A prominent explanation for psychopathic antisocial behavior is that these individuals do not understand what counts as morally wrong (Blair, 1995; Blair, 1997; Blair, Jones, Clark, & Smith, 1995). This proposition is important because it bears on legal and philosophical debates about whether a diagnosis of psychopathy should qualify as an excusing or mitigating condition for individuals adjudicated for crimes (see Aharoni, Funk, Sinnott-Armstrong, & Gazzaniga, 2008; Blair, 2008; Fine & Kennett, 2004; Levy, 2007; Litton, 2013; Morse, 2008; Pillsbury, 2013). Most U.S. jurisdictions stipulate that defendant may be eligible for excuse on the basis of insanity if they fail to know or appreciate the wrongfulness of their actions (M’Naghten Rule, 1843; Model Penal Code § 4.01(1), 1962). Historically, a psychopathy diagnosis has almost never been successful as an excusing or mitigating factor, but experimental research has led some scholars to conclude that psychopathy should merit such consideration (Blair, 2008; Fine & Kennett, 2004; Levy, 2007; Litton, 2013; Morse, 2008). Given the implications of this proposal for public safety,

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civil rights, and associated economic consequences, it is imperative to consider the empirical basis for and against this stance.

One primary source of evidence that individuals with psychopathy fail to understand wrongfulness comes from three studies by Blair and colleagues (Blair, 1995; Blair, 1997; Blair, Jones, & Clark, 1995). In these studies, the investigators assessed the ability of adult ($Ns = 20$ and 40) and juvenile ($N = 32$) offenders who were low or high in psychopathy to correctly classify hypothetical actions on the basis of their moral content. To do this, they employed the Moral-Conventional Transgressions task (MCT). The MCT, originally developed by Turiel and colleagues (Nucci & Nucci, 1982; Nucci & Turiel, 1978; Turiel, 1979; Turiel, 1983), challenges respondents to identify properties of moral wrongs that distinguish them from other acts that are wrong merely by social convention. One such property that is central to discussions of psychopaths is known as “authority independence,” which refers to the unique tendency for the status of moral wrongs to remain stable despite counter-claims by authority figures. For example, if a school principal declares it is now permissible to chew gum in class, most people agree it is no longer wrong, suggesting that this act is a social convention because its perceived wrongfulness is dependent on what the authority says. In contrast, if a principal, president, or even the pope pronounced that it is now permissible to pull children’s hair, most people will nonetheless insist that it is still wrong, according to this theory.

Using the MCT, Blair and colleagues (1995) asked participants to judge, for each of eight hypothetical playground scenarios, whether (a) the featured action was permissible, and (b) whether it would still be permissible even if a relevant authority figure (the teacher) said it was ok. With reference to previous literature, half of the scenarios were predetermined to reflect moral violations, and the other half reflected only conventional violations. The investigators found that participants low in psychopathy classified the moral scenarios as significantly higher in authority independence than the conventional scenarios, as expected. However, high psychopathy participants made no such distinction. Both groups were predominantly white males matched for intelligence quotient (IQ).

This result has been used to support the conclusion that individuals with psychopathy do not understand what qualifies as morally wrong—a conclusion that appears to be consistent with findings that these individuals less strongly endorse core moral values (Aharoni, Antonenko, & Kiehl, 2011; Glenn, Iyer, Graham, Koleva, & Haidt, 2009), are insensitive to others’ distress (Blair, 2005; Blair, Jones, Clark, & Smith, 1997), and exhibit abnormal judgment in moral dilemma tasks (Koenigs, Kruepke, Zeier, & Newman, 2010), economic games (Koenigs, Kruepke, & Newman, 2010), and moralistic punishment decisions (Aharoni, Weintraub, & Fridlund, 2007).

On the basis of Blair and colleagues’ MCT finding, it is tempting to infer that psychopathic individuals exhibit high rates of antisocial behavior because they do not believe these transgressions are morally wrong. However, when psychopathic participants failed to make a moral-conventional distinction in Blair’s studies, they did not rate both types of scenarios as permissible. Rather, they tended to rate both types of scenarios as impermissible,

regardless of authority opinions, suggesting, counter-intuitively, that the participants believed all scenarios contained moral violations.

The authors interpreted this counter-intuitive effect as the result of socially desirable responding or “faking good”: Since the psychopathic individuals in the study did not have strong intuitions about which acts are recognized as morally wrong, perhaps they strategically classified all the acts as wrong to make a good impression (see Blair 1995, p. 23; Blair et al., 1995, p. 749). This interpretation seems plausible and would be consistent with the glib and superficial charm so characteristic of psychopathic individuals.

The social desirability theory, however, was never tested. As we have argued elsewhere, failures in the MCT do not necessarily imply lack of moral understanding (Aharoni et al., 2012; Maibom, 2008) because morally knowledgeable people can be affected by social desirability too. Specifically, it remains possible that psychopathic participants had initially correct intuitions about the wrongfulness of the acts until a social desirability artifact of the task prompted a secondary motivation to over-rate the wrongfulness of the conventional acts, masking their otherwise correct responses. Traditional versions of the MCT do not allow us to test this possibility because they confound *personal endorsement* of moral propositions with descriptive *knowledge* of the socially prescribed status of those propositions.

The notion that psychopathic moral reasoning abilities may be effectively normal has some empirical footing (Aharoni et al., 2012; Cima, Tonnaer, & Hauser, 2010; Link, Sherer, & Byrne, 1977; Simon, Holzenberg, & Unger, 1951; for a review, see Borg & Sinnott-Armstrong, 2013). Therefore, deeper scrutiny into the MCT methods is warranted. In Blair and colleagues’ original MCT studies, participants were free to rate each question’s moral status independently of the other questions. Instead, if respondents were expected to make a forced choice between the pre-defined “moral” and “conventional” transgressions, then over-classification would not be an effective strategy, permitting a purer test of moral understanding in a socially objective sense. In that case, individuals who truly lack moral understanding should continue to perform more poorly than controls. However, if accuracy is not associated with psychopathy, this forced-choice response format would suggest that they do understand moral wrongfulness.

This is exactly the strategy employed in a recent study by the present investigators (Aharoni et al., 2012). In that study, offenders with varying degrees of psychopathy were presented with 16 scenarios depicting either a moral or conventional violation, as judged by a normal (non-psychopathic) sample. Participants were informed that exactly half of the scenarios were considered by typical members of society to be morally wrong. Moral wrongfulness was explicitly defined as acts that society considers wrong even if there were no rules, customs, or laws against them. Notably, this approach shifts the research question from an interest in whether psychopathic offenders personally endorse moral propositions to an interest in whether they understand the socially prescribed status of those propositions. However, we view this as a welcome change because of the latter question’s greater implications for criminal responsibility. Within this forced-choice framework, no association was observed between participants’ psychopathy scores and the percentage of correctly

classified acts. Instead, most participants performed well on the task regardless of psychopathy score, suggesting that psychopathic offenders may understand moral wrongfulness as well as other offenders when social desirability factors are removed.

Interestingly, significant associations were found between moral classification accuracy and specific psychopathic traits, as represented by the (1) interpersonal, (2) affective, (3) lifestyle, and (4) antisocial “facets” of psychopathy (see Hare, 2003). Example items from each facet include glibness, lack of empathy, impulsivity, and juvenile delinquency, respectively. We found that increases in the affective and antisocial traits of psychopathy were associated with reduced classification accuracy but that increases in psychopathic lifestyle traits were associated with increased task accuracy (Aharoni et al., 2012), suggesting that any problems understanding moral wrongfulness may be explained by particular traits rather than by psychopathy as a whole.

There were at least three limitations of our forced-choice study, however. First, novel scenarios were developed to be age-appropriate for adults, so the pattern of results could have been due to a change in stimuli rather than the change in instruction. Second, only six offenders in that sample met full clinical criteria for psychopathy. Third, the observation of a null association between psychopathy score and item classification accuracy is vulnerable to a Type II error, and raises a demand for external replication with a new sample.

The present study was designed to address these limitations by providing an external replication using Blair’s original test stimuli (Blair, 1995) in a large and diverse new sample of offenders representing a full range of psychopathy scores. For our primary hypothesis test, we asked whether moral classification accuracy can be explained by psychopathy total score, while controlling for potential effects of correlated demographic variables (age, gender, and race/ethnicity) when appropriate.

Because we tested a more diverse sample than reported in previous MCT studies of psychopathy, it was also important to test several variants of the hypothesis in order to draw a more direct comparison to previous, more homogenous samples. Therefore, we examined whether the hypothesized association between psychopathy score and moral classification accuracy was dependent on participant age and whether it was specific to formerly studied demographic groups, namely white and male participants.

In addition to these primary tests, we examined two supplemental questions designed to clarify the results of those tests. First, we examined whether psychopathy score was negatively associated with perceptions that the transgression involves harm. If psychopathy is associated with reduced harm judgments, then any moral classification problems among psychopathic individuals could potentially be explained by their failure to recognize the presence of harm. Last, previous research has suggested that if there is a hidden relationship between psychopathy and moral classification accuracy, it might be driven by a particular subset of psychopathic traits, particularly the affective and antisocial aspects of psychopathy (Aharoni et al., 2012). To explore this possibility, we examined whether moral classification accuracy was predicted by the individual facets of psychopathy.

Method

Participants

Participants were 139 volunteers recruited from one of three correctional facilities in North America, housing adult males, adult females, or adolescent males convicted of a felony. All participants were part of a larger study, which stipulated the following exclusion criteria: age greater than 59, history of psychosis, loss of consciousness due to head injury greater than 15 minutes, English literacy below 4th grade level, intelligence quotient (IQ) less than 65, participation in a previous version of the MCT. The larger study from which this sample was drawn recruited inmates for neuroimaging research. The moral-conventional task was administered on a separate day preceding the neuroimaging session. Participants were paid \$1/hr., a rate commensurate with standard pay for work assignments. The study was approved by Institutional Review Boards in each jurisdiction. All participants provided written informed consent.

Design and Hypotheses

The study design involved a single categorization task administered between March 2012 – March 2014 to participants with varying degrees of psychopathy. The task depicted two transgression types (moral vs. conventional). Moral wrongfulness was defined by acts that society would consider wrong even if there were no rules, customs, or laws against them. The dependent variable was the percentage of moral items classified correctly, as stipulated in Blair, 1995. We evaluated the hypothesis that psychopathy score was negatively associated with moral classification accuracy across the sample as a whole and with respect to age group and gender. Finally, we examined the hypotheses that psychopathy facet scores negatively predicted moral accuracy and that psychopathy total score was negatively associated with the perception that the moral transgressions involved harm.

Materials

Moral and conventional stimuli were directly adapted from Blair (1995). See Table 1. Two versions were constructed, whose order of transgressions was reverse counter-balanced, but were otherwise identical.

Assessment

Psychopathy was assessed using the Psychopathy Checklist–Revised (PCL-R; Hare, 2003) or Psychopathy Checklist—Youth Version (PCL-YV; Forth, Kosson, & Hare, 2003), depending on the participant age group (< 18 years). The PCL-R and PCL-YV are comprised of a detailed archival analysis and semi-structured interview. The PCL is a reliable and valid instrument for assessing psychopathic traits in incarcerated, forensic, psychiatric, and general populations (Hare, 1980; 1991; 1996; Harpur et al., 1988, 1989; Fulero, 1996; Kosson, Cyterski, Steuerwald, Neumann, & Walker-Matthews, 2002). In adults, clinical psychopathy is conventionally diagnosed by a total score of 30+ (Hare, 1991). Although our primary analyses employ a dimensional model of psychopathy (see Guay, Ruscio, Knight, & Hare, 2007; Walters, Duncan, & Mitchell-Perez, 2007), supplementary analyses used the diagnostic cutoff score for replication purposes, defining “high” (≥ 30) vs. “low” (< 30)

psychopathy groups. PCL assessments were conducted by one of twelve raters, each of whom completed extensive PCL training and regular reliability testing. Previously published research from this lab has documented high inter-rater reliability (.93) among a random sample of double-rated PCL assessments from the same correctional facilities (see Harenski et al., 2010). Although the PCL-R and PCL-YV are not identical, the youth version was modeled very closely after the adult version, and the two psychopathy constructs are highly related (Forth et al., 2003; Hare et al., 2003; Lynam, Caspi, & Moffitt, 2007). Combining these scores analytically provided the opportunity to increase the statistical power necessary to detect small effects but only at the cost of high psychometric purity. Therefore, the foregoing analysis tests both approaches, modeling adult and juvenile psychopathy scores separately and together. In the present sample, individuals with high psychopathy scores were strategically over-sampled to construct a more symmetrical distribution of scores. (The lower psychopathy individuals who were not selected for this task participated in an unrelated task slated within the same study protocol.)

For participants over age 15 ($n = 128$), intelligence was assessed using Vocabulary and Matrix Reasoning subtests of the Wechsler Adult Intelligence Scale III (WAIS; Wechsler, 1997; validated by Ryan, Lopez, & Werth, 1999). For those 15 or younger ($n = 11$), the Wechsler Intelligence Scale for Children (WISC-IV) was used (Wechsler, 2003). Although both scales have been normalized to a mean (SD) score of 100 (15), research suggests that WISC scores may be roughly 12 points lower than WAIS scores for the same individual (Gordon, Duff, Davidson, & Whitaker, 2010; Whitaker & Gordon, 2008), and indeed, WISC scores ($M = 73.9$) were substantially lower than WAIS scores ($M = 96.1$) in our sample, $t(137) = -5.12, p < .001$. Therefore, in order to justify pooling adults and juveniles into the same metric for analysis, a 12-point constant was added to the 11 participants with WISC scores (though neither adjusted nor unadjusted IQ was ultimately significantly associated with our primary independent or dependent variables).

Procedure

The four moral and four conventional stimuli were administered along with written and oral instructions that exactly half of the acts had been judged by members of society to be morally wrong. Moral wrongfulness was defined as acts that society would consider wrong even if there were no rules, customs, or laws against them. Participants were then instructed to specify which four items were previously judged to be wrong in this way.¹ Subsequently, each act was rated for whether or not the participant thought the act caused harm. Last, demographic information was collected.

¹Exact instructions were “Most people in society agree that exactly four of the eight acts below are wrong. In their view, even if there were no rules, conventions, or laws against these four acts, the acts would still be wrong. The other four are not seen as wrong in that way by most people. First, read all the acts once. Then, please guess which acts most people in society think are wrong. You can do this by placing a checkmark next to the number of the statement below. You should check exactly four of them, and leave the rest blank.”

Results

Descriptive Statistics

The sample was 58.3% male, 62.6% adult (over 17), 44.6% Hispanic ethnicity, 23.0% Black, 36.7% White, and 29.5% other or unreported races. (Racial and ethnic categories are not mutually exclusive, so may not add to 100%.) Mean age was 28.2 ($SD = 10.8$).

Mean Psychopathy Checklist score was 23.2 ($SD = 7.9$), Facet 1 $M = 3.2$ ($SD = 2.8$), Facet 2 $M = 4.2$ ($SD = 2.4$), Facet 3 $M = 6.0$ ($SD = 2.1$), Facet 4 $M = 7.8$ ($SD = 2.3$). 44.4% of the males, 8.6% of the females, 16.1% of the adults, and 51.9% of the juvenile participants met full clinical criteria for psychopathy. Adjusted mean IQ score was 95.3 ($SD = 14$), and mean moral accuracy score was 72.7% ($SD = 16.5\%$), significantly greater than the chance score of 50%, $t(138) = 16.24$, $p < .001$.

Inferential Statistics

Before conducting our primary hypothesis tests about moral classification accuracy, we examined whether psychopathy score was negatively associated with the perception that the moral transgressions involved harm. To test this, we constructed a hierarchical linear regression model with age, gender, race, and ethnicity entered as covariates in step 1 and PCL total score for the entire sample entered in step 2. The dependent measure was the number of moral items rated as harmful (0–4). Although the overall model was significant, $R^2 = .14$, $R^2 = .01$, $F(5, 129) = 4.18$, $p < .01$, a significant association between PCL score and harm was not found, $t(129) = -1.17$, $p = .24$, $B = -.01$, 95% CI $[-.01, .01]$.²

Hypothesis Tests—In preparation for our hypothesis tests, a series of Pearson correlations was conducted to examine whether extraneous variables could be suppressing variance in test scores otherwise attributable to psychopathy. If so, variance attributed to these extraneous variables can be removed in subsequent hypothesis testing. The results of the correlational analysis indicated that higher psychopathy scores in our sample were more prevalent among younger participants, male participants, and those identifying as Black and non-Hispanic (see Table 2). These findings suggest that potential variation in psychopathy score associated with moral classification accuracy could be vulnerable to suppression by age, gender, race, or ethnicity. These results formed the controls for our primary hypothesis tests.

1. Does psychopathy total score predict MCT accuracy, controlling for age, gender, race, and ethnicity?: We constructed a hierarchical linear regression model to test the primary hypothesis, namely that moral accuracy is significantly associated with psychopathy score controlling for variation attributed to age, gender, race, and ethnicity. To achieve this, all covariates were entered into the model at step one, and psychopathy score was entered at step two (all mean-centered). No associations were found between psychopathy and MCT

²The harm regression model was repeated separately for adults and juveniles under the assumption that their PCL score represent two distinct populations. Here, the adult model comported with the combined model, showing no association between PCL-R and the perception that the moral transgressions involved harm, $t(77) = .60$, $p = .55$. The juvenile model yielded a negative association between PCL-YV and harm, $t(46) = -2.18$, $p < .05$.

accuracy, $R^2 = .03$, $R^2 = .00$, $F(5, 133) = .81$, $p = .55$, $t(133) = .58$, $p = .57$, $B = .12$, 95% CI $[-.30, .55]$ (see Fig. 1).³ This test was repeated for adult and juvenile participants separately, under the assumption that their psychopathy scores reflect different distributions. No significant associations were found for adults, between psychopathy and MCT accuracy, $R^2 = .06$, $R^2 = .03$, $F(5, 77) = .97$, $p = .44$, $t(77) = 1.59$, $p = .12$, $B = .39$, 95% CI $[-.10, .89]$, or juveniles, between psychopathy and MCT accuracy, $R^2 = .05$, $R^2 = .01$, $F(4, 46) = .60$, $p = .6$, $t(46) = -.79$, $p = .44$, $B = -.34$, 95% CI $[-1.21, .53]$.

2. Does the hypothesized effect of psychopathy on moral accuracy depend on age or gender, controlling for variation attributed to race and ethnicity?:

Previous studies observed the MCT effect for adult males and, to a lesser extent, adolescent males, but females were never examined. To test whether the effect might depend on age or gender, a hierarchical linear regression model was constructed entering race and ethnicity at step one and psychopathy total score, age, gender, and their products at step two. No associations were found, $R^2 = .05$, $R^2 = .03$, $F(7, 131) = .97$, $p = .46$, for the main effect of psychopathy score, $t(131) = .66$, $p = .51$, $B = .14$, 95% CI $[-.29, .58]$, or its interaction with age, $t(131) = .10$, $p = .92$, $B = .00$, 95% CI $[-.04, .04]$, or its interaction with gender, $t(131) = -1.29$, $p = .20$, $B = -.68$, 95% CI $[-1.71, .36]$.⁴ As above, this test was repeated for adult and juvenile participants separately. However, for adults, no associations were observed between psychopathy and moral accuracy, $R^2 = .07$, $R^2 = .06$, $F(7, 75) = .85$, $p = .55$, either independently, $t(75) = 1.12$, $p = .27$, $B = .41$, 95% CI $[-.32, 1.14]$, or interactively with age, $t(75) = -.50$, $p = .62$, $B = -.01$, 95% CI $[-.07, .04]$, or gender, $t(75) = -.99$, $p = .32$, $B = -.52$, 95% CI $[-1.57, .53]$. Likewise, among juveniles, no associations were found, $R^2 = .05$, $R^2 = .01$, $F(5, 45) = .47$, $p = .80$, either for the psychopathy main effect, $t(45) = -.01$, $p = .99$, $B = -.07$, 95% CI $[-11.11, 10.97]$, or interactively with age, $t(45) = .05$, $p = .96$, $B = .02$, 95% CI $[-.90, .94]$.

3. Does moral accuracy depend on psychopathy facet score?: If MCT accuracy is not associated with psychopathy total score, it nonetheless might be associated with variation in any of the psychopathy facet scores. As expected, the zero-order facet inter-correlations are sizeable (see Table 3). Thus, in four distinct hierarchical linear regression models, we regressed moral accuracy on each psychopathy facet, controlling for age, gender, race, ethnicity, and the other three facets. However, no significant associations were observed between moral accuracy and any of the individual psychopathy facets (see Table 4). We also found no effect of the facets when examining their shared variance (i.e., not controlling for the other facets), $R^2 = .05$, $R^2 = .03$; $F(1, 130) = .90$, $p = .52$.

³Previous research reported dichotomous effects of psychopathy group on MCT accuracy. To replicate that approach, we searched for differences in moral accuracy as a function of psychopathy group membership where groups were defined by whether or not they met the PCL-R's diagnostic cutoff score of 30. However, controlling for variation attributed to gender, age, race, and ethnicity, a one-way ANOVA found no difference in moral classification accuracy between low ($M = 72.2\%$, $SE = 1.8\%$, $n = 98$) and high ($M = 73.8\%$, $SE = 2.9\%$, $n = 41$) psychopathy groups, $F(1, 133) = .18$, $p = .67$, $MD = 1.6\%$, 95% CI $[-8.8, 5.7]$.

⁴To validate the results of the multiple regression, a three-way ANOVA between psychopathy group, age group, and gender on moral classification accuracy was conducted, controlling for variation attributed to race and ethnicity. As above no differences in moral accuracy were observed between low ($M = 72.8\%$, $SE = 1.9\%$, $n = 98$) and high ($M = 76.4\%$, $SE = 3.4\%$, $n = 41$) psychopathy groups independently, $F(1, 131) = .98$, $p = .32$, $MD = 3.6\%$, 95% CI $[-4.2, 11.4]$, or interactively with age group, $F(1, 131) = .15$, $p = .70$, or gender, $F(1, 131) = .94$, $p = .33$.

Conclusion and Discussion

Previous studies have reported that psychopathic individuals fail to distinguish between common moral and conventional wrongs (Blair, 1995; Blair et al., 1995). The present study, in contrast, found no effect of psychopathy or its component facets on moral classification accuracy. The null effect of psychopathy persisted both in sample-wide tests and within selected age, gender, and race subgroups. Indeed, no matter how the data were parsed, performance (which was significantly above chance, on average) was unrelated to psychopathy score. Moreover, we found no association between psychopathy score and the perception that the moral transgressions involved harm, suggesting that such perceptions were not explained by psychopathy.

The stimuli used were the same as those used in the studies reporting an abnormal MCT effect of psychopathy. A key difference between study methodologies was that previous studies asked participants to rate each act independently whereas the present study asked them to accurately classify the acts into pre-defined (forced-choice) groups. This latter approach serves to remove extraneous incentives to rate all acts as wrong, permitting us to measure moral understanding without strategic responding. Another important difference was that the earlier studies had much smaller sample sizes, between 20–40 participants. The pattern of results lends additional support to the argument that psychopathic individuals can correctly classify wrongs, and that earlier results to the contrary may have obscured that effect by evoking strategic responding.

This pattern of results is consistent with another study ($N = 109$) that employed the same classification format but used novel stimuli (Aharoni et al., 2012). It is also consistent with early work showing that females high in psychopathy provided deviant responses to a moral dilemma questionnaire under free response conditions, but not when the questionnaire obeyed a multiple choice format (Simon et al., 1951). Indeed, at least one study utilizing a free response format found that psychopathic participants achieved higher scores than controls on Kohlberg's Moral Judgment scale, somewhat reminiscent of Blair's finding that they rated both moral and conventional acts as wrong (Link et al., 1977). Taken together, we suggest that the current evidence for moral reasoning deficits among psychopathic individuals is not sufficient to justify arguments for reduced responsibility in psychopathic offenders on the basis of not 'knowing' right from wrong.

The observed pattern of results comports with the alternative view that psychopathic individuals "know right from wrong but don't care" (Cima et al., 2010). To its credit, there is no shortage of evidence that psychopathic individuals lack care or empathy (See Hare, 2003; Patrick, 2005). However, this may not be an adequate explanation of psychopathic behavior because it is not clear that empathy is itself within their cognitive control. If the day-to-day propensity to attach value to others' welfare depends on input from particular physiological, emotional, or volitional processes that are dysfunctional in psychopathic individuals, then this could provide a mechanistic explanation for why psychopathic moral knowledge does not translate directly into moral action. Indeed, there is ample evidence of physiological, emotional, and volitional problems in psychopathic individuals, so identifying

causal links between these states, empathy, and behavior may be a fruitful avenue of future research.

Limitations and Future Research

As with any study, the ability to generalize our results is limited by the procedures used. First, caution should always be used in interpreting null differences between groups. We attempted to overcome this limitation by testing our primary hypothesis in several different ways, targeting multiple sub-samples of potential relevance, but all variants yielded the same null result. The sample average, however, was significantly greater than chance performance. This pattern of results held true despite narrow confidence intervals and a larger sample with greater numbers of individuals meeting clinical criteria for psychopathy than any other MCT study to date. Although these assurances increase confidence in our pattern of results, further research is needed to rule out the possibility of a Type II error.

In order to maximize statistical power, we opted to pool PCL-R and PCL-YV scores into a single metric as well as WISC and WAIS IQ scores designed for juvenile and adult populations. While there is some justification for these choices in the empirical literature, they risk introducing error variance into our combined models. Future research of this type would benefit from samples sufficiently large to control or explicitly test their potential independent or interactive effects.

One purpose of this study was to examine the independent contribution of psychopathy on moral classification accuracy, excluding other confounding factors. Notwithstanding, it is possible that the failure to detect an association between psychopathy and moral classification accuracy was due to the fact that important sources of variance were partialled out by our exclusion criteria. For instance, if psychopathic moral reasoning deficits are explained, ostensibly, by general cognitive decline, then this pattern could have been missed by excluding those with psychosis or an IQ < 70. However, there is no evidence to suggest that psychosis or low IQ are definitional of psychopathy. For this reason, as well as ethical reasons, these conditions were upheld for exclusion, and yet still no independent association was found. Nonetheless, it remains possible that otherwise unobserved conditions comorbid with psychopathy could yield a different result.

Tests of psychopathic moral classification accuracy, though critically important for questions bearing on their moral reasoning capacities per se, tell us little about how this reasoning is (or is not) applied to shape real-world behaviors. It would be revealing, for instance, to examine whether psychopathic individuals are inclined to commit moral and convention violations indiscriminately, or instead commit one of these types more than the other.

It should be emphasized that the task was designed to gauge participants' reported beliefs about the normal moral status of particular acts (i.e., according to typical members of society). These responses do not necessarily represent whether the participants *personally endorsed* those normative propositions. This fundamental property of the task departs from the 1995 version, which attempted to draw conclusions about participants' beliefs about the normal moral status of the acts from questions that queried their personal endorsements

only. The limitation of that approach is that if they fail the task, it is impossible to know whether it was because they didn't know better, knew but didn't agree with the classification scheme, or agreed but were prompted by task demands to moralize the conventional acts. Today, there is no shortage of evidence that psychopathic offenders exhibit weaker personal endorsement of moral rules (e.g., Aharoni et al., 2007; Aharoni et al., 2011; Blair & Blair, 2011; Glenn et al., 2009; Young, Koenigs, Kruepke, & Newman, 2012). However, the remaining question of interest to both scientific and legal perspectives is the question of whether psychopathic individuals know what is normally considered immoral, and our findings align with the position that they do seem to understand normal moral wrongfulness under forced-choice conditions.

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Highlights

- Revised Moral/Conventional Transgressions task administered to 139 incarcerated offenders varying in psychopathy.
- Classification accuracy of moral transgressions was not associated with psychopathy, controlling for age, gender, or race.
- Consistent with argument that psychopathic individuals can demonstrate normal knowledge of wrongfulness.

Fig. 1.

Table 1

Study stimuli.

Moral Transgressions	Conventional Transgressions
A boy breaks the school swing in the playground.	A boy walks out of the classroom without permission.
A boy smashes the school piano with a hammer.	A boy wears a skirt to school.
A boy pulls the hair of another boy and makes him cry.	A boy talks to another boy in the middle of the lesson.
A boy runs up and hits another boy in the face.	A boy turns his back on the teacher while the teacher is talking to him.

Table 2

Pearson correlations between psychopathy (PCL) total score and eight variables of interest. Unlisted races were not sufficiently frequent to justify correlational analysis. All *Ns* = 139.

Variable	Correlation (<i>r</i>) with PCL
Moral Accuracy	.03
Age	-.41 ***
Male	.48 ***
Hispanic	-.31 ***
Black	.32 ***
White	-.18 *
IQ	-.10
MCT version order	-.05

*
= $p < .05$;

**
= $p < .01$;

= $p < .001$

Table 3All p 's < .001

	Facet 2 (<i>r</i>)	Facet 3 (<i>r</i>)	Facet 4 (<i>r</i>)
Facet 1	.63	.49	.47
Facet 2		.44	.54
Facet 3			.47

Table 4

Results of four regression analyses, each composed of two steps, for adults and juveniles combined and separated. No significant associations were observed between moral classification accuracy and any of the psychopathy facet scores. All $R^2 = .05$; All $R^2 < .02$; All $F(1, 130) = .90$;

Model, Step	Variable	Ages Combined				Adult				Juvenile			
		B	SE	β	$t(p)$	B	SE	β	$t(p)$	B	SE	β	$t(p)$
Facet 1, Step 1	Age	0.00	0.00	0.05	0.47 (.64)	0.00	0.00	0.04	0.38 (0.69)	0.00	0.01	0.04	0.32 (0.74)
	Gender	0.02	0.04	0.07	0.61 (.54)	0.02	0.03	0.07	0.64 (0.52)	--	--	--	--
	White	0.04	0.03	0.13	1.37 (.17)	0.02	0.03	0.07	0.57 (0.56)	0.06	0.07	0.15	0.89 (0.37)
	Hispanic	0.03	0.03	0.09	0.95 (.35)	0.02	0.03	0.06	0.51 (0.6)	0.00	0.07	0.00	0 (0.99)
	PCL Facet 1	--	--	--	--	--	--	--	--	--	--	--	--
Facet 2, Step 1	PCL Facet 2	-0.01	0.01	-0.07	-0.64 (.53)	0.00	0.00	-0.10	-0.76 (0.44)	0.00	0.01	0.08	0.43 (0.66)
	PCL Facet 3	0.00	0.01	0.03	0.32 (.75)	0.01	0.00	0.17	1.37 (0.17)	-0.01	0.01	-0.01	-0.98 (0.33)
	PCL Facet 4	0.01	0.01	0.18	1.59 (.11)	0.01	0.00	0.20	1.45 (0.14)	0.00	0.02	0.00	0.03 (0.97)
	Age	0.00	0.00	0.05	0.44 (.66)	0.00	0.00	0.05	0.44 (0.65)	0.00	0.01	0.03	0.23 (0.81)
	Gender	0.02	0.04	0.07	0.58 (.56)	0.01	0.03	0.05	0.45 (0.64)	--	--	--	--
Facet 3, Step 1	White	0.05	0.03	0.13	1.47 (.14)	0.02	0.03	0.09	0.74 (0.45)	0.06	0.07	0.13	0.82 (0.41)
	Hispanic	0.03	0.03	0.09	0.94 (.35)	0.02	0.04	0.09	0.67 (0.5)	0.00	0.08	-0.01	-0.06 (0.94)
	PCL Facet 1	0.00	0.01	-0.06	-0.45 (.65)	0.00	0.01	-0.02	-0.16 (0.86)	0.00	0.01	-0.02	-0.15 (0.87)
	PCL Facet 2	--	--	--	--	--	--	--	--	--	--	--	--
	PCL Facet 3	0.00	0.01	0.03	0.32 (.75)	0.01	0.00	0.16	1.24 (0.21)	-0.01	0.01	-0.13	-0.69 (0.49)
Facet 3, Step 1	PCL Facet 4	0.01	0.01	0.17	1.51 (.13)	0.01	0.00	0.18	1.27 (0.2)	0.00	0.02	0.03	0.21 (0.82)
	Age	0.00	0.00	0.05	0.45 (.65)	0.00	0.00	0.03	0.29 (0.77)	0.00	0.01	0.02	0.19 (0.84)
	Gender	0.02	0.04	0.06	0.58 (.57)	0.01	0.03	0.04	0.32 (0.74)	--	--	--	--
	White	0.04	0.03	0.12	1.34 (.18)	0.02	0.03	0.09	0.72 (0.47)	0.07	0.07	0.17	1.05 (0.29)
	Hispanic	0.03	0.03	0.08	0.85 (.40)	0.02	0.04	0.09	0.64 (0.51)	0.00	0.08	-0.01	-0.11 (0.91)
Facet 3, Step 1	PCL Facet 1	0.00	0.01	-0.02	-0.48 (.63)	0.00	0.01	0.09	0.59 (0.55)	0.00	0.01	-0.10	-0.59 (0.55)
	PCL Facet 2	0.00	0.01	-0.06	-0.16 (.87)	0.00	0.01	-0.11	-0.75 (0.45)	0.00	0.01	0.03	0.18 (0.85)
	PCL Facet 3	--	--	--	--	--	--	--	--	--	--	--	--
	PCL Facet 4	0.01	0.01	0.20	1.82 (.07)	0.01	0.00	0.25	1.82 (0.07)	0.00	0.02	-0.01	-0.06 (0.94)

Model, Step	Variable	Ages Combined					Adult					Juvenile				
		B	SE	β	t (p)	B	SE	β	t (p)	B	SE	β	t (p)			
Facet 4, Step 1	Age	0.00	0.00	0.01	0.12 (.91)	0.00	0.00	0.01	0.1 (0.92)	0.00	0.01	0.04	0.31 (0.75)			
	Gender	0.04	0.04	0.12	1.03 (.30)	0.03	0.03	0.11	0.95 (0.34)	--	--	--	--			
	White	0.05	0.03	0.13	1.44 (.15)	0.03	0.03	0.10	0.78 (0.43)	0.06	0.07	0.15	0.91 (0.36)			
	Hispanic	0.04	0.03	0.11	1.10 (.27)	0.04	0.03	0.13	1 (0.31)	0.00	0.08	-0.01	-0.06 (0.95)			
	PCL Facet 1	0.00	0.01	-0.03	-0.24 (.81)	0.00	0.01	0.07	0.49 (0.62)	0.00	0.01	-0.03	-0.2 (0.83)			
Step 2 (All models)	PCL Facet 2	0.00	0.01	-0.02	-0.14 (.89)	0.00	0.01	-0.08	-0.55 (0.58)	0.00	0.01	0.09	0.5 (0.61)			
	PCL Facet 3	0.01	0.01	0.10	0.94 (.35)	0.01	0.00	0.21	1.72 (0.08)	-0.01	0.01	-0.16	-0.81 (0.42)			
	PCL Facet 4	--	--	--	--	--	--	--	--	--	--	--	--			
	Age	0.00	0.00	0.05	.45 (.66)	0.00	0.00	0.04	0.35 (0.72)	0.00	0.02	0.04	0.3 (0.75)			
	Gender	0.03	0.04	0.08	.66 (.51)	0.02	0.03	0.07	0.6 (0.54)	--	--	--	--			
	White	0.04	0.03	0.12	1.33 (.18)	0.02	0.03	0.07	0.59 (0.55)	0.06	0.07	0.15	0.88 (0.38)			
	Hispanic	0.03	0.03	0.08	.84 (.40)	0.02	0.04	0.07	0.54 (0.58)	0.00	0.08	0.00	-0.05 (0.95)			
	PCL Facet 1	0.00	0.01	-0.04	-.28 (.78)	0.00	0.01	0.03	0.18 (0.85)	0.00	0.01	-0.03	-0.2 (0.83)			
	PCL Facet 2	0.00	0.01	-0.06	-.53 (.60)	0.00	0.01	-0.11	-0.76 (0.44)	0.00	0.01	0.09	0.45 (0.65)			
	PCL Facet 3	0.00	0.01	0.04	.39 (.70)	0.01	0.00	0.16	1.24 (0.21)	-0.01	0.02	-0.16	-0.8 (0.42)			
	PCL Facet 4	0.01	0.01	0.18	1.59 (.11)	0.01	0.00	0.19	1.37 (0.17)	0.00	0.02	0.00	0.02 (0.97)			

* $p < .05$.